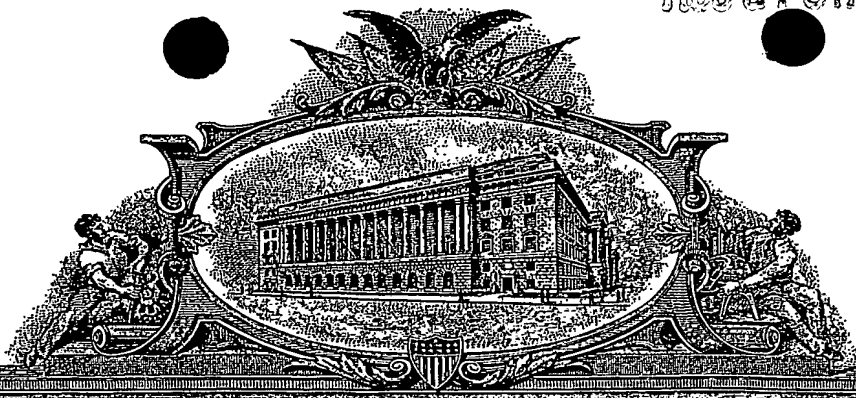


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APPLICATION NUMBER: 60/402,994

FILING DATE: August 12, 2002

RELATED PCT APPLICATION NUMBER: PCT/US03/25421



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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

Express Mail Label No. EV060611322US

08/12/02
1c885 U.S. PTO

1c973 U.S. PTO
60/402994

INVENTOR(S)					
Given Name (first and middle [if any])		Family Name or Surname		Residence (City and either State or Foreign Country)	
Pierre		Bonnat		Grieges, France	
<input type="checkbox"/> Additional Inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (280 characters max)					
Method And Apparatus For Implementing User Interface Control, And Natural Light Source Usage For Such Control					
Direct all correspondence to: CORRESPONDENCE ADDRESS					
<input checked="" type="checkbox"/> Customer Number		<div></div>		<div> *08791*</div>	
OR		Type Customer Number here			
<input checked="" type="checkbox"/> Firm or Individual Name		André L. Marais Blakely, Sokoloff, Taylor & Zafman LLP			
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Address					
City		Los Angeles	State	California	ZIP 90025-1030
Country		USA	Telephone	(408) 947-8200	Fax (408) 947-8280
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages		2	<input type="checkbox"/> CD(s), Number		<div></div>
<input checked="" type="checkbox"/> Drawing(s) Number of Sheets		2	<input type="checkbox"/> Other (specify)		<div></div>
<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76					
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT (check one)					
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.				FILING FEE AMOUNT (\$)	
<input checked="" type="checkbox"/> A check or money order is enclosed to cover the filing fees					
<input type="checkbox"/> The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number:				02-2666	
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.				\$160.00	
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input checked="" type="checkbox"/> No					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are:					

Respectfully submitted,
SIGNATURE André L. Marais Date 8/12/2002
TYPED or PRINTED NAME André L. Marais REGISTRATION NO. 48,095
TELEPHONE (408) 947-8200 (if appropriate)
Docket Number: 5769P005Z

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

This collection of information is required by 37 CFR 1.51. The information is used by the public to file (and by the PTO to process) a provisional application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the complete provisional application to the PTO. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, DC 20231.

**FEE TRANSMITTAL
for FY 2002**

Patent fees are subject to annual revision

☐ Applicant claims small entity status. See 37 CFR 1.27.**TOTAL AMOUNT OF PAYMENT (\$)** 160.00**Complete if Known**

Application Number	
Filing Date	
First Named Inventor	Pierre Bonnat
Examiner Name	
Group/Art Unit	
Attorney Docket No.	5769P005Z

METHOD OF PAYMENT (check one)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None
☐ Deposit Account

Deposit Account Number **02-2666**
 Deposit Account Name **Blakely, Sokoloff, Taylor & Zafman LLP**

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments
☒ Charge any additional fee(s) required under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20
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FEE CALCULATION**1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
101	740	201	370	Utility filing fee	
106	330	206	165	Design filing fee	
107	510	207	255	Plant filing fee	
108	740	208	370	Reissue filing fee	
114	160	214	80	Provisional filing fee	
SUBTOTAL (1)					160.00

2. EXTRA CLAIM FEES

Total Claims - ** = X = **\$0.00**
 Independent Claims - ** = X = **\$0.00**
 Multiple Dependent =

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
103	18	203	9	Claims in excess of 20	
102	84	202	42	Independent claims in excess of 3	
104	280	204	140	Multiple Dependent claim, if not paid	
109	84	209	42	**Reissue independent claims over original patent	
110	18	210	9	**Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)					0.00

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FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for ex parte reexamination	
112	920 *	112	920 *	Requesting publication of SIR prior to Examiner action	
113	1,840 *	113	1,840 *	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	400	216	200	Extension for reply within second month	
117	920	217	460	Extension for reply within third month	
118	1,440	218	720	Extension for reply within fourth month	
128	1,880	228	940	Extension for reply within fifth month	
119	320	219	160	Notice of Appeal	
120	320	220	160	Filing a brief in support of an appeal	
121	280	221	140	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,280	241	640	Petition to revive - unintentional	
142	1,280	242	640	Utility issue fee (or reissue)	
143	480	243	230	Design issue fee	
144	620	244	310	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Processing fee under 37 CFR 1.17(q)	
126	180	126	180	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
148	740	248	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
179	740	279	370	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

(\$)

SUBMITTED BY

Name (Print/Type)	André L. Marais	Registration No. (Attorney/Agent)	48,095	Telephone	(408) 947-8200
Signature		Date	08/12/02		

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UNITED STATES PROVISIONAL PATENT APPLICATION

FOR

METHOD AND APPARATUS FOR IMPLEMENTING USER INTERFACE
CONTROL, AND NATURAL LIGHT SOURCE USAGE FOR SUCH
CONTROL

INVENTOR:

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Prepared by:

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Attorney's Docket No. 5769P005Z

"Express Mail" mailing label number: EV060611322USDate of Deposit: August 12, 2002

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Leslie Rogan

(Typed or printed name of person mailing paper or fee)

Leslie D. Rogan
(Signature of person mailing paper or fee)8/12/02
(Date signed)

METHOD AND APPARATUS FOR IMPLEMENTING USER INTERFACE CONTROL, AND NATURAL LIGHT SOURCE USAGE FOR SUCH CONTROL

The present application incorporates by reference the following co-pending applications:

1. Application serial no. 09/913,398, entitled "METHOD AND DEVICE FOR MONITORING AN ELECTRONIC OR COMPUTER SYSTEM BY MEANS OF A FLUID FLOW", filed August 10, 2001.
2. Application serial no. 60/368,602, entitled "A METHOD AND APPARATUS FOR POINTING AND CLICKING FUNCTIONS FOR CURSOR TRACKING IN GUI ENVIRONMENT", filed March 29, 2002.
3. Application serial no. 60/378,561, entitled "METHOD AND DEVICE FOR PROVIDING INPUT INTERFACE FOR THE AVIONICS AND AEROSPACE APPLICATION", filed May 6, 2002.
4. Application serial no. 60/378,561, entitled "METHOD AND APPARATUS FOR MONITORING AN ELECTRONIC OR COMPUTER SYSTEM BY MEANS OF A FLUID FLOW UTILIZING OPTO-ELECTRONIC CONVERSION DEVICES", filed May 6, 2002.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention is illustrated by way of example and not limitation in the figures of the accompanying drawings, in which like references indicate similar elements.

DETAILED DESCRIPTION

A method and apparatus for implementing user interface control, and natural light source usage for such control are described. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be evident, however, to one skilled in the art that the present invention may be practiced without these specific details.

Although the present invention is described with reference to specific exemplary embodiments, it will be evident that various modifications and changes may be made to these embodiments without departing from the broader spirit and scope of the invention. Accordingly, the specification and drawings are to be regarded in an illustrative rather than a restrictive sense.

Here is a preferred embodiment for input interfaces based on what has been described in previous applications. This embodiment is notably aimed at advanced mobile telephony, mobile computing, assistive inputting.

These interfaces are designed so that the easiness of use is enhanced, and in order to help preventing unwanted responses, thanks to a logical scheme. Indeed, it seems to be natural and easier to blow out for motion purposes, and to suck in for short stresses such as clicking functionalities. In line with this reasoning, a variety of additional functionalities can be added, such as zooming, preferably based on blowing out to move forward, and sucking in to move backward.

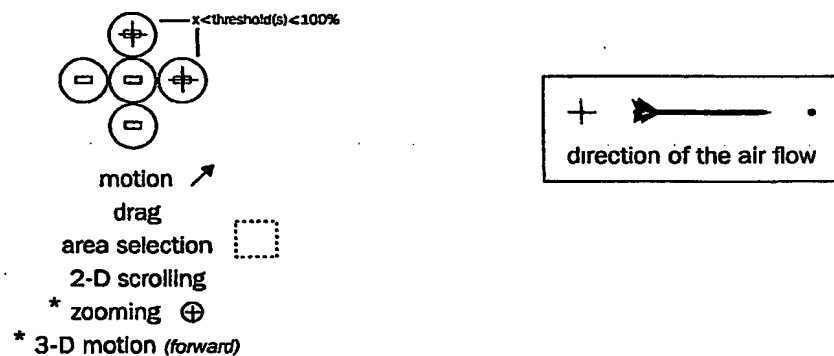
This should be noticed also that motion is possibly aided by a software, possibly customizable, preferably embedded into the device itself, especially when such a device is a headset, in order to avoid difficulties such as the need for a sustained breath from the pointer's starting point up to the target, whereas clicking and selecting functionalities have recourse to thresholds to define parameters such as duration, intensity, etc.. Thanks to these means, for instance, users can breath by impulses in order to drive the pointer, rather than sustain their breathing.

Lastly, this should be noted that the present design allows to implement many other functionalities than those mentioned hereafter (zooming, 3-D motion).

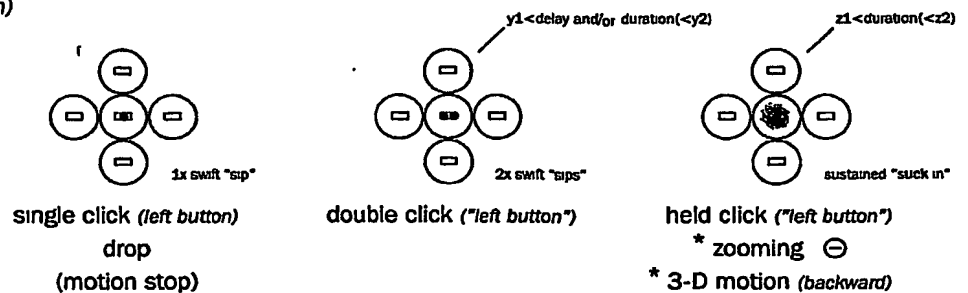
According to the described embodiment, the interfaces are made up of five conduits, each including one segment, to be stressed by the user blowing out (four) or sucking in (one, preferably central). The whole gamut of functionalities to be needed in considered environment such as mobile telephony and computing, assistive inputting, with no limitation, results from logical combinations.

In terms of energy saving/ power management, such a design is preferably using, as for the motion functionality, as many sensors as conduits/ segments (four). In such an embodiment, by default all LEDs are lit (with, possibly, in addition, a on/ off button for the whole device). But when the user starts stressing one or several segments, the power is managed so that when a maximum two sensors are being used (based on a threshold to monitor the stress intensity and determine which segment(s) are above this value, and on the maximum of two segments that are submitted to the two highest stresses), the "opposite two" LEDs (opposite conduits/ segments) can be turned off, given that, for instance, the pointer cannot be pointed, for example, simultaneously, toward the up and right part of a monitor, and toward its down and left side.

Pointing (navigation/ motion)



Clicking (selection/ activation)



(optional) Additional Functionalities
* considered embodiment = zooming/ 3-D motion

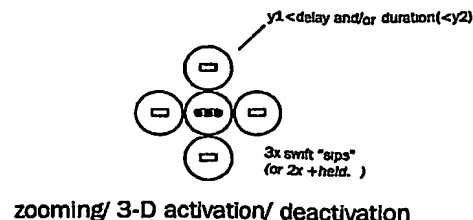


Figure 2

In one embodiment of the input interfaces, daylight is utilized to complement or replace artificial source of light such as, preferably, InfraRed LEDs, mostly as for outdoor operation.

The ambient daylight is piped, channelled, close to the segment, through any conductive-to-light material, so that the light receivers/ detectors of the sensors are able to receive this natural source of light with sufficient intensity, and preferably in a comparable way to LED, as to the direction of the light, and other main characteristics, depending on the stress of the segments, and their related translation.

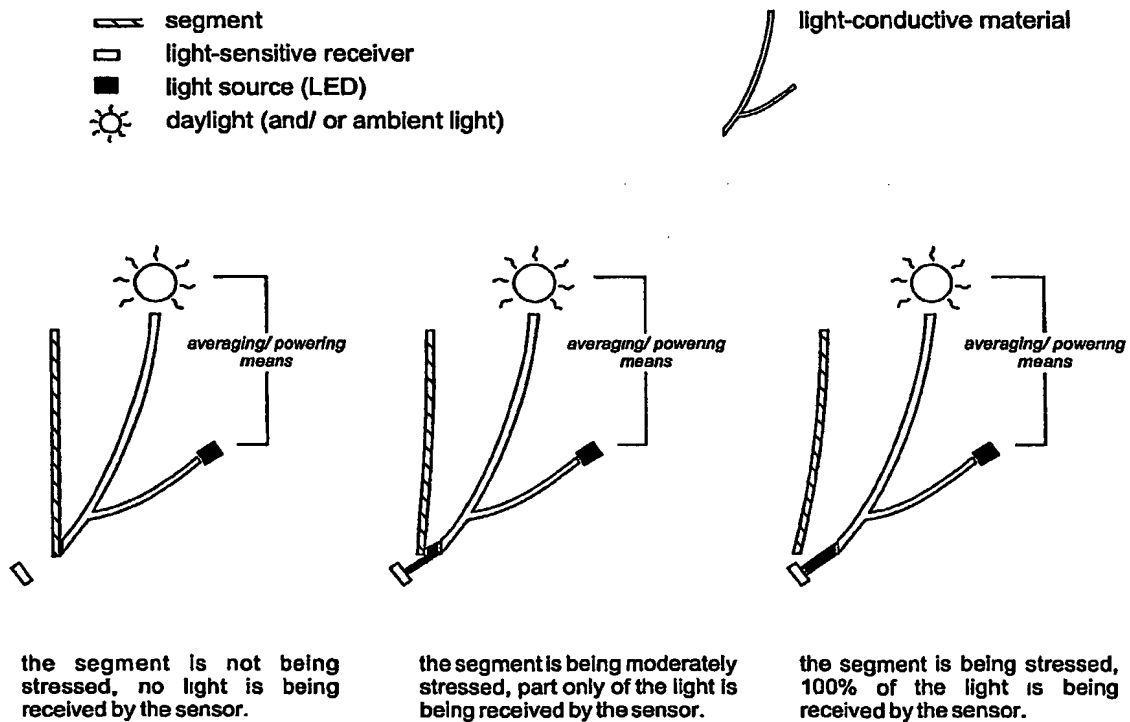
With such a design, a maximum output is recorded from the sensor when the segment is completely "open", even with a relatively low amount of daylight.

Special means such as, preferably, embedded softwares (microcontroller) are implemented to average the amounts of artificial/ natural daylight. They are to record/ sample the ambient light intensity, and then either to turn LEDs on/ off, to replace the ambient light depending on the recorded/ sampled values, or to use these levels to power the artificial sources (LEDs) in a variable way, just to complement the ambient light.

Lastly, this should be noted that:

a/ specific sensors, adapted to fluorescent and/or incandescent lights (possibly in addition to IR), could allow to complement or replace LEDs as for indoor operation. In such contexts, the concept of the present invention is to utilize, at the same time, artificial light, preferably supplied by LEDs and conductive-to-light material, and ambient light, that could be daylight as well as fluorescent, incandescent light,

b/ the principle of complementing/ replacing light sources such as LEDs with ambient daylight and/ or artificial sources such as fluorescent and/or incandescent lights can be utilized in many different suitable applications, in addition to the present input interfaces.



In the figures above, the levels of light from the light source (LED) and from the ambient light are averaged by means such as a microcontroller with embedded software so that the sensor is able to receive suitable levels of light to run the application.

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